

REMARKS

Reconsideration of the present application is respectfully requested. Claims 1-33 were previously canceled. In this amendment, no claims have been amended, canceled or added. No new matter has been added.

Summary of Office Action

Claims 34-62 remain rejected under 35 U.S.C. § 102(e) based on U.S. Patent no. 5,901,156 of Botzenhardt et al. ("Botzenhardt").

Response to Office Action

Applicants respectfully traverse the rejection and maintain their arguments presented in the previous response, filed on 2/20/2007. On page 2 of the present Office Action, the Examiner provides the following response to Applicant's arguments:

Applicant on page 9 argues that Botzenhardt does not disclose the use of Internet protocol (IP) much less the use of IP in relation to a CAN bus, or the idea of enabling IP hosts to communicate on a CAN bus. In Botzenhardt convention the identifier identifies contents such as addresses, and data, sensor signals, correcting quantities, intermediate results, synchronization instructions, instructions perform a function, rotational speed, rotational speed gradients, engine temperature, engine load, instructional data etc. Botzenhardt in col. 9, lines 15-35 and in Fig. 7 discloses transmission protocol which describes the interface between the individual computers and the line linking the computers with the aid of a controller, where the line connects the computer for the transmission of messages. In this system, a message is comprised of the bit fields START-OF-FRAME, IDENTIFIER, CONTROL-FIELD, DATA-FIELD, CRC-FIELD, ACK-FIELD, END-OF-FRAME and INTERMISSION. In this description, the terms HIGH and LOW are used in the sense of logic levels. While HIGH as a recessive effect on the bus, and LOW is dominant. As a result, all bus users receive a LOW level if at least one of several bus users sends a LOW. A bus user may begin the transmission of a message only if the bus is free, that is, in the BUS-IDLE status. All receivers are synchronized on the leading edge caused by START-OF-FRAME. Office Action, p. 2.

Applicant does not see how the Examiner's response has any relevance to Applicant's claim language. The disclosure in Botzenhardt cited by the Examiner (as quoted above) does not relate to Internet Protocol (IP). IP is a very well-known, specific protocol, which has been in existence since at least as early as 1981 (see IETF RFC 791, September 1981) and has long been known throughout the world as "Internet Protocol" or "IP". Botzenhardt provides a fairly detailed description of a transmission protocol, as noted by the Examiner, yet nowhere does Botzenhardt even mention the term "IP". It would be quite odd for Botzenhardt to disclose IP without referring to it by name, in light of IP's long and widespread use worldwide. Indeed, the transmission protocol disclosed in Botzenhardt is not IP and does not relate to IP. There is absolutely no disclosure, suggestion or even a hint, of using IP anywhere Botzenhardt.

Furthermore, the Examiner cites col. 9, lines 15-35 and Figure 7 in Botzenhardt, but that text and figure relate to the data link layer, whereas IP is a network layer protocol (as is well known). As support for this point, consider that Botzenhardt references the book, A. Tannenbaum, *Computer Networks*, Prentice Hall International, 1981 ("Tannenbaum"), in col. 1, lines 57-58. Enclosed with this response is a copy of figure 4-16 from Tannenbaum, which is substantially identical to Figure 7 in Botzenhardt. That figure (4-16) is an example from chapter 4 of Tannenbaum, which is titled "The Data Link Layer" (emphasis added).

Applicant respectfully requests that, if the Examiner intends to maintain this rejection, the Examiner clarify in the next Office Action exactly why/how the Examiner thinks the cited disclosure of Botzenhardt (p. 2 of present Office Action) discloses the use of IP.

Applicant therefore respectfully maintains the following arguments:

Claim 34 recites the limitation, “communicating information between *Internet protocol (IP)* hosts over a controller area network (CAN) bus within a vehicle *by encapsulating an IP message* in a CAN protocol message.” Botzenhardt does not disclose, mention or even hint at the use of *Internet protocol (IP)*, much less the use of IP in relation to a CAN bus, or the idea of enabling *IP* hosts to communicate on a CAN bus. Botzenhardt further does not disclose or suggest *encapsulating an IP message* in a CAN protocol message or why it would be advantageous to do so. Hence, assuming *arguendo* Botzenhardt discloses a CAN bus and CAN protocol messaging (which Applicant does not concede), Botzenhardt still does not come close to anticipating the invention of claim 1 or rendering it obvious. For at least these reasons, therefore, claim 1 and all claims which depend on it are patentable over the cited art.

All of Applicant's other independent claims also include limitations that relate to IP, similar to those discussed above. Therefore, all of Applicant's other independent and all claims which depend on them are patentable over the cited art, at least for reasons similar to those discussed above.

Dependent Claims

In view of the above remarks, a specific discussion of the dependent claims is considered to be unnecessary. Therefore, Applicants' silence regarding any dependent claim is not to be interpreted as agreement with, or acquiescence to, the rejection of such claim or as waiving any argument regarding that claim.


Conclusion

For the foregoing reasons, the present application is believed to be in condition for allowance, and such action is earnestly requested.

If there are any additional charges/credits, please charge/credit our deposit account no. 02-2666.

Respectfully submitted,
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destuffs (i.e., deletes) the 0 bit. Just as character stuffing is completely transparent to the software in both computers, so is bit stuffing. If the user data contained the flag pattern 01111110, it would be transmitted as 011111010 but stored in the receiver's memory as 01111110. Figure 4-15 gives another example of how bit stuffing works.

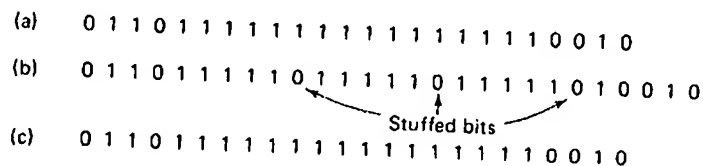


Fig. 4-15. Bit stuffing. (a) The original data. (b) The data as they appear on the line. (c) The data as they are stored in the receiver's memory after destuffing.

All the bit-oriented protocols use the frame structure shown in Fig. 4-16. The *Address* field is primarily of importance on multidrop lines, where it is used to identify one of the terminals. For point-to-point lines, it is sometimes used to distinguish commands from responses.

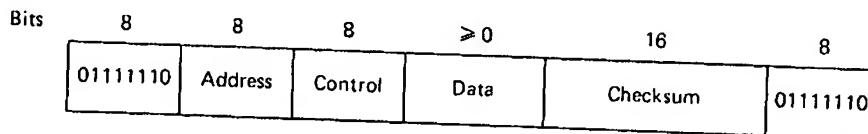


Fig. 4-16. Frame format for bit-oriented protocols.

The *Control* field is used for sequence numbers, acknowledgements, and other purposes, as discussed below.

The *Data* field may contain arbitrary information. It may be arbitrarily long, although the efficiency of the checksum falls off with increasing frame length due to the greater probability of multiple burst errors.

The *Checksum* field is a minor variation on the well-known cyclic redundancy code, using CRC-CCITT as the generating polynomial. The variation is to allow lost flag bytes to be detected.

The frame is delimited with another flag sequence (01111110). On idle point-to-point lines, flag sequences are transmitted continuously, just as SYN characters are usually transmitted during idle periods when BISYNC is used. The minimum frame contains three fields and totals 32 bits, excluding the flags on either end.

There are three kinds of frames: **Information**, **Supervisory**, and **Unnumbered**. The contents of the *Control* field for these three kinds are shown in Fig. 4-17. The protocol uses a sliding window, with a 3-bit sequence number.